Analysis of the work by Rockefeller Foundation to train high public health professionals in Brazil (1917-1951) based on a prosopographical study

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In this brief text we propose to discuss a few aspects of the research that we are performing in the History Department at Universidade do Vale do Rio dos Sinos, Unisinos (Rio Grande do Sul, Brazil), which aims to discuss the work done by the Rockefeller Foundation to train public health professionals in the first decades of the 20th century and their relationship with the development of institutions and public health policies in Brazil. This was done mainly by granting fellowships through which the North American institution sought to disseminate ideas and models. By performing a prosopographical study whose subjects are the 88 Brazilian fellows of the International Health Division (IHD) belonging to the Rockefeller Foundation, between 1917 and 1951, it will be possible to discuss, among other aspects, the process by which the Foundation selects the people who are to receive the fellowships and their profile, as well as their professional career, taking into account the objectives of the fellowships mentioned above.

Through this study we will try to partly fill the gap pointed out by Darwin H. Stapleton in an article entitled "The past and the future of research in the history of science: medicine, and technology at the Rockefeller Archive Center," when he says that it is necessary to investigate further regarding the relationship between the training that the students received, their careers, when they returned to their country of origin, and the influence they exerted on the institutions and/or government agencies in which they worked.
The text is organized in four parts. In the first we will have a general discussion about the program of the RF/IHD. Then we will present an overview of the relationship between Brazil and the IHD as regards the topic of our study. In the third part, we will present a brief profile of the fellowships and IHD fellows connected to Brazilian institutions between 1917 and 1951, based on information available in the Directory of Fellowships and Scholarships published by the Foundation in 1972. In the fourth and last part we will underscore important sources for our project which are safeguarded at the Rockefeller Archive Center (RAC).

The International Health Division and the Fellowship Program

According to John Farley, before the World Health Organization (WHO) was founded in 1948, the International Health Division was probably the most important agency working in public health worldwide. Likewise, Anne-Emanuelle Birn says that during the first half of the 20th century no agency had such an outreach or was as active in promoting international public health as the Rockefeller Foundation.

The Rockefeller Foundation, a North American philanthropic institution, is defined in general as “a benevolent, non-governmental organization that uses its own resources to fund social well-being activities in several countries of the world”. Maria Gabriela Marinho says that the Foundation “[...] is at the heart of the process that generated and constituted the field of action of what was later described as scientific philanthropy”. In brief, the author says, philanthropy can be defined as destining private resources to activities in the public interest. On the other hand, scientific philanthropy is destining private resources to the production of scientific knowledge. The Foundation was established in 1913 for the purpose of incorporating in a single organization institutions belonging to the Rockefeller family such as the General Education Board and the Sanitary Commission for the Eradication of Hookworm Disease.

According to Lina Faria and Maria Conceição da Costa, two moments of work done by the Rockefeller Foundation can be identified on a global scale. Initially, when it began in 1913, medical and public health actions were emphasized. During the 1920s and 1930s the Rockefeller activities were directed to research and control of infectious
diseases such as hookworm, yellow fever and malaria. In a second moment, consolidated at the end of the 1940s, the development of medical education, physical and biological sciences and agriculture were the focus of the institution.\textsuperscript{8}

The purpose of the Rockefeller Foundation’s International Health Division, established in 1913, was to extend the work of combating hookworm, performed by the Sanitary Commission – organized in 1909, to combat the disease in the south of the United States – to other countries. The Division was called International Health Commission (IHC) between 1913 and 1916, International Health Board (IHB) between 1916 and 1927 and International Health Division (IHD) between 1927 and 1951 and, by the time it ended its activities in 1951, had been present in over 80 countries of the world, including all countries of South America. Between 1913 and 1951, the International Health Division had worked to combat hookworm, yellow fever and malaria, and in other public health campaigns in the south of the United States, and in almost one hundred other countries around the world. During the same period, the International Health Division founded a number of public health schools in North America, Europe, Asia and Brazil, and awarded thousands of fellowships to health care professionals.\textsuperscript{9}

Between the 1920s and 1960s, the Foundation helped “[...] to construct and implement an extensive network of scientific institutions that provided the diffusion and consolidation of a model of science. In this sense it is correct to say that the work done by the Rockefeller Foundation can be seen as decisive in institutionalizing science on a world scale”.\textsuperscript{10} The Foundation worked with technical and/or financial resources to establish medical schools; new disciplines in the fields of pathology, anatomy, histology and microbiology; institutes of hygiene and schools of public health and nursing to train health care professionals. The London School of Hygiene (England), the Peking Union Medical College (China), the School of Surgery and Medicine of Havana (Cuba), the São Paulo Institute of Hygiene (Brazil)\textsuperscript{11} and the Ana Nery School of Nursing (Brazil)\textsuperscript{12} are some examples of this field of work of the institution.\textsuperscript{13}

The possibility of training abroad based on granting fellowships was a major aspect of the scientific dimension of the work done by the Rockefeller Foundation. At the worldwide level, the Foundation had a pioneering role in granting fellowships for medical science and public health.\textsuperscript{14}
According to Wickliffe Rose, Director of the IHD between 1913 and 1923, professional education was an essential component of progress in public health on an international level. As Rose conceived it, a select group of public health specialists would disseminate the knowledge acquired in their respective countries by research, administration and teaching. In the interpretation of Anne-Emanuelle Birn, this approach would not only save financial resources, enabling the Foundation to implement programs in many more places, the international fellows would also be in a better position with regard to the representatives of the Rockefeller Foundation to disseminate relevant theories, practices and values to researchers, government agencies, professional communities and the public in general. Having established ties with top universities in the United States, the fellows, when they returned home would keep up a relationship with the North American institutions and ideas during their professional careers. Also according to Birn, among the “possible” advantages of distributing fellowships was the development of relations with leaders and future leaders of other countries and international scientific exchanges.15

The purpose of Rockefeller Foundation in granting fellowships was to train people to work in strategic positions in official health agencies or as directors and/or teachers at schools of hygiene and public health. Occupying head positions in institutions and government departments in their home countries, the fellows could determine institutional orientations and priorities, reflecting some of the ideas and practices with which they had become familiar during their studies.16 In this sense, as Birn clearly points out, the fellows were transnational professionals, moving ideas and practices across borders. The direct or indirect influence of the fellows could be felt for many decades, since often, besides advising the work at institutions and/or in health departments, they were often also teachers in their countries, thus influencing other generations of government employees in public health.17 Through the fellows, the Foundation and in the specific case of our study, the International Health Division, could have a lasting effect on theory and practice of public health in the different countries and regions where it had been present.18

Brazil and the International Health Division

Brazil received technical and financial support from the International Health Division of Rockefeller Foundation, to train professionals for work in public health
through institutions such as the Institute of Hygiene of São Paulo, for instance, and benefited from a great number of fellowships.

The Rockefeller Foundation cooperated with dozens of countries but, according to authors such as Lina Faria, “Brazil was the American country on which the Rockefeller Foundation invested the largest amount of capital. Of about 13 million dollars invested in sanitation and education programs in countries of this continent, seven millions were directed towards the development of medical education, scientific research and sanitation campaigns in Brazil”. As an example, the Foundation worked in this country to combat hookworm (1916-1923), malaria (1919-1928) and yellow fever (1923-1940). Specifically as regards fellowships, several authors highlight the great number of them granted by the Rockefeller Foundation to Brazil in the Latin American context. The analysis of the information contained in a directory of RF fellowships between 1917 and 1970, however, indicates that the number of fellowships granted by IHD/FR to Brazil was significant, not only in the Latin American context, but in the general context: out of the total of 2056 fellowships granted by IHD to professionals of more than 80 countries between 1917 and 1951, 92 fellowships (4.4%) were granted to 88 professionals working in this country.

At a first glance this number may appear small, which requires explanation. Out of the total of 2056 fellowships distributed among 1990 fellows (64 fellows received two fellowships each and one received three), 622 (30,2%) were awarded to professionals who were working in the United States; 207 (10%), to professionals who worked in Canada and 114 to professionals who worked in India. Brazil, with its 92 fellowships (4.4%) was in fourth place on a list composed of more than 80 countries. Adding up the fellowships received by professionals who worked in the USA, Canada, India and Brazil, we obtain a total of 1035 fellowships awarded to professionals working in four countries, i.e., more than half the fellowships (50,1%). Mexico, the second Latin American country in number of fellowships awarded by the International Health Division, was in 6th place in the general table, with 68 fellowships (3,3%), followed by Venezuela, 8th, with 44 fellowships (2,1%).

Luiz Antonio de Castro Santos and Lina Faria say that if there were positive and lasting effects of the work done by the Rockefeller Foundation in Brazil, these effects are concentrated mainly “in laying the roots of medical education and the health care
professions”. According to the authors “the origins of professionalized physicians, sanitarians and nursing professionals in public health [...] are strongly associated with the work done by this institution in Brazil”.23

The first professional who worked in Brazil to receive a fellowship from the International Health Division was Carlos Pinheiro Chagas in 1917. After him, 87 other individuals connected to institutions and/or government departments of the country received, between 1917 and 1951, fellowships from IHD, making up a total of 88 fellows who received 92 fellowships since four fellows (Edith Fraenkel, Nuno Guerner, Zilda Almeida Carvalho Hughes and Alayde Borges Carneiro Paraense) received two fellowships each.24

The fellowships awarded to the 88 professionals who were working in Brazilian institutions were distributed among fellows connected to over two dozen institutions, including universities, medical schools, and health institutes and departments. Several Foundation fellows occupied outstanding regional, national and even international positions in the fields of public health and nursing, as in the case, for instance of Geraldo Horácio de Paula Souza, Edith Fraenkel and Marcolino Gomes Candau.25

However, despite the significant number of Brazilian IHD fellows of the Rockefeller Foundation, there are no specific studies on these fellows as a group, regarding the impact, their influence on the institutions and/or government agencies where they worked, and, consequently, on the public health policies developed in the country. And this is, as we have already indicated, what we propose to do in this project.

The Brazilian fellows: first approaches

Since this research study is still at the initial phase of development, we will here trace only a short profile, based on the information available in Directory of Fellowships and Scholarships (1917-1970), of the IHD fellowships and fellows connected to Brazilian institutions, highlighting aspects such as areas and period of studies.

A first aspect that we would like to highlight is the concentration of most of the fellowships awarded by the International Health Division to Brazil in the first years that the Rockefeller Foundation was present in the country.28 Out of the total of 92 fellowships, 59 were awarded up to 1930, the period during which the Institute of Hygiene (1918) and the Anna Nery School of Nursing (1923) were founded. These
institutions had former fellows among their staff. Besides, the concentration of fellowships during this period may possibly be understood as a way to establish closer ties with government institutions and departments at this initial, and, therefore more sensitive moment of the presence of the Rockefeller Foundation in the country.

Another aspect that we would like to highlight is the country where the fellows studied. In the case of the 88 fellows who worked in Brazil and received 92 fellowships from the International Health Division of the RF, the vast majority studied in the United States: 78 of the 92 fellowships were awarded to take courses at North American institutions, eight at Canadian ones, three at Brazilian ones and three fellowships were awarded for studies at institutions in more than one country (United States and France, United States and Far East, United States and Canada). As we can see the Foundation did not award fellowships only to North American institutions.

In only 17 cases, the institution where the fellows studied was mentioned in the Directory: 14 fellows studied at Johns Hopkins University and three at Harvard University, which does not mean, however, that they were the only ones to study at these institutions.

The period of studies, as fellows, for researchers and professionals working in Brazil was generally one year, as in 64 of the 92 fellowships granted. However, some fellowships allowed a longer period of studies: 22 fellowships were for two years, four were for three years and two were for four years.

As regards the field of studies of Brazilian fellows, more than 50% of the fellowships were granted to study public health: 49 of the 92 fellowships (53%). Nursing was also a major field of studies for Brazilian professionals, with 31 of the 92 fellowships (33.6%) being awarded for studies in this field. The remaining fellowships were awarded for studies in fields related to medicine (eight fellowships or 8.6%) and biological sciences (four fellowships or 4.3%).

As to the distribution of fellowships per fields, we would like to briefly underscore two aspects.

The first aspect concerns the gender of the fellows in relation to the field of studies. Of the 29 women who received fellowships from the International Health Division, 28 received them to study nursing. In other words, women received all the
fellowships for the field of nursing (31 fellowships), while the fellowships for public health, medicine and biological sciences were awarded almost entirely to male professionals.

The second aspect that should be underscored is the numerical relationship between the fellowships granted in the field of public health and nursing. Looking at all the fellowships awarded by IHD to professionals of different countries between 1917 and 1951 – 2056 fellowships – 74.8% of them were to study in the field of public health and 20.7%, in nursing. Specifically in the case of fellowships awarded to professionals connected to Brazil, this difference is significantly smaller: of the 92 fellowships awarded, 53% of them were awarded to study in the field of public health and 33.6% in the field of nursing. We believe that this less unequal distribution between the public health and nursing fellowships in Brazil, as we have already mentioned, is due to the involvement and investments of the Rockefeller Foundation in the development of nursing in the country.

The RF Fellowship Cards and the Fellowship Files

As mentioned, we will conclude by highlighting two important sources of documents for our research project that are safely kept in the Rockefeller Archive Center: the Fellowship Cards and the Fellowship Files.

The Fellowship Cards of Rockefeller Foundation supply basic information on each of the institution fellows, such as name, country of origin, Foundation division authorizing the award, subject and discipline of fellowship and others. The information contained in the Cards summarizes the data available in the Fellowship Files and they were collected by administrative staff of the Foundation. Although it is more interesting and productive to analyze these documents together, this is not always possible. The great majority of the Brazilian IHD fellows between 1917 and 1951 only have Fellowship Cards, but this documentation will be extremely important to perform the proposed study.

A first and essential contribution of the Fellowship Cards is that they confirm the universe to be researched. By consulting these documents it can be confirmed that the 88 Brazilian fellows found in the Directory do indeed comprise the population to be researched in the prosopographical study.
Detailed analysis of the Cards will provide some information about the way the fellows were chosen, because the documents show, even if not in a standardized manner, biographical information (including the education that they had received in Brazil), besides information concerning the choice/indication of the fellows.

Besides, data can also be found on the studies done through the fellowship, and also professional contacts established based on it. The professional trajectory of the fellows, a major element in our analysis, can also be, even if only partially, followed by these documents, since the Foundation sought to keep informed about the careers of the former fellows. Analyzing the cards it will also be possible to see, in some cases, if the fellows kept up their relations with the Foundation after their studies, and what kind of relationship it was.

The smaller number of Fellowship Files found for the fellows researched (only 23 of the 88) generally show copies of the Personal History Record and Application for Fellowship, documents that provide personal, educational and professional information.
As we said, these sources which will be compared to others, such as biographical dictionaries, for instance, will be extremely important for this project which is now being developed.

1 The principle of prosopography, according to Christophe Charle, is “[...] to define a population based on one or several criteria, and in this ways establish a biographical questionnaire whose different criteria and variables will serve to describe its social, private, public or even cultural ideological or political dynamics, according to the population and the questionnaire being analyzed. [...] Once all the documents have been gathered, and this is the longest part of the work, data can be examined using multiple, quantitative or qualitative techniques, manual or computerized counts, statistical pictures or factorial analyses, depending on the wealth or sophistication of the questionnaire and the sources” (CHARLE, Christophe. A prosopografia ou biografia coletiva: balanço e perspectivas. In: HEINZ, Flávio Madureira (Org.). Por outra história das elites. Rio de Janeiro: Editora FGV, 2006, p. 41).


11 The Institute of Hygiene of São Paulo, currently the School of Public Health of the University of São Paulo (USP) was founded in 1918. The Institute was the second institution in the world to receive assistance from the Rockefeller Foundation, preceded only by the Johns Hopkins School of Hygiene and Public Health, the institutional and pedagogical model for institutions such as the one in São Paulo. (CASTRO SANTOS, Luiz Antonio de; FARIA, Lina. O ensino da Saúde Pública no Brasil: os primeiros tempos no Rio de Janeiro. Trabalho, Educação e Saúde, Rio de Janeiro, v. 4, n. 2, set. 2006, [s.p.]). For further information on the Institute of Hygiene of São Paulo, see FARIA, 2007; CAMPOS, Cristina de. São Paulo pela Lente da Higiene: As Propostas de Geraldo Horácio de Paula Souza para a Cidade (1925-1924). São Carlos: RiMa, 2002; ROCHA, Heloisa Helena Pimenta. A higienização dos costumes: educação escolar e saúde no projeto do Instituto de Higiene de São Paulo (1918-1925). Campinas, São Paulo: Mercado de Letras; São Paulo: Fapesp, 2003.

12 The School of Nursing of the National Department of Public Health (DNSP) was founded in 1923 through cooperation between the DNSP and the IHD, which sent to Brazil the Technical Mission for Cooperation for the Development of Nursing, headed by Ethel Parsons. In 1931, the school, then called Anna Nery School of Nursing was considered the official model school of nursing in Brazil. The School is now part of the Federal University of Rio de Janeiro (UFRJ) (School of Nursing of the National Department of Public Health. Dicionário Histórico-Biográfico das Ciências da Saúde no Brasil, 1831-1930. Casa de Oswaldo Cruz, Fiocruz. Available on: http://dichistoriasaude.coe.fiocruz.br/iah/P/pdf/escenfan.pdf. Accessed on Sep 5, 2012.


15 BIRN, 2006, p. 197.

16 According to the Foundation itself, the institution had a number of criteria to select the fellows: “The Rockefeller Foundation had a standard set of criteria for its fellowship awards. Applicants needed to have finished their formal education with advanced degrees and training. They also needed to be employed by universities, research institutes or governmental bodies. Direct applications were discouraged; potential applicants were identified by RF officers. A fellowship award was typically one to two years in duration”. Also according to the Foundation, the objectives of the fellowship program were as follows: “Thus the functions of the Rockefeller Foundation (RF) fellowship program have been to select individuals of outstanding promise in the fields of interest defined by the general program of the Foundation, and to help to prepare individuals to make significant contributions to research and teaching or public service in the future” (RF, RG 10.2 – Fellowship Recorder Cards, Reading Room – History of the Fellowship Program at the Rockefeller Foundation).

17 BIRN, 2006, p. 201.

18 Ibidem, p. 215. But the fact that most of the fellows studied in the United States and with the support of the Foundation did not mean, and this is important, that these fellows simply transplanted to their countries what they had learned during the time they studied abroad. Again, quoting Anne-Emanuelle Birn, she says that “advanced professional training was a propitious means of international health interchange for both sides, one which allowed a role for the donor and left ample room for local developments with selective appropriation of outside ideas” (Ibidem, p. 203). The knowledge and training acquired abroad were adapted according to the local political and social needs.

19 Among the countries with which the Foundation cooperated are: Ecuador, Mexico, Argentina, Colombia, Chile, Paraguay, Peru, Uruguay, Venezuela, Costa Rica, Guatemala, Haiti, Nicaragua, Panama, El Salvador, Jamaica, Trinidad and Tobago, Granada, Ceylon, India, Malasia, Korea, Thailand,

20 FARIA, 2007, p. 18.


22 The data concerning the fellowships of the International Health Division awarded to professionals working in Brazil were organized based on the information available in The Rockefeller Foundation. Directory of Fellowships and Scholarships (1917-1970). New York: The Rockefeller Foundation, 1972. The Directory contains information about approximately 9,500 fellows of all of the Foundation programs (not only of IHD), in which 498 are mentioned as connected to Brazil when they received the fellowship (Country of residence at time of award), information taken into account to organize the data about Brazil. The information about the fellows in the Directory are as follows: 1. Name [surname and name], 2. Country of residence at time of award, 3. Date and country of birth, 4. Academic degree held at time of award with name of granting institution and date, 5. Institution where employed or studying at time of award, 6. Foundation program designation and dates of award, 7. Country of study; 8. Degree received during award with name of granting institution and date e 9. Field of study.


24 We obtained the information presented here also from the analysis of data available in the Directory of Fellowships and Scholarships (1917-1970).

25 Geraldo Horácio de Paula Souza received a fellowship from IHD to study public health at Johns Hopkins School of Hygiene and Public Health between 1918 and 1920. When he returned, Paula Souza held several positions and became involved in many activities. In Brazil, for instance, he was the director of the Institute of Hygiene of São Paulo (1921-1951) and of the Sanitary Service of São Paulo (1922-1927). In his international work he was a technical specialist in the Hygiene Section of the League of Nations (1927-1929) and participated in founding the World Health Organization (WHO) (CAMPOS, 2002).

26 Edith Magalhães Fraenkel received a fellowship from IHD to study nursing on two occasions: between 1922 and 1925, and between 1940 and 1941. Fraenkel had an outstanding role in the development of nursing in Brazil. Among other activities, she organized and was the first president of ANEDB (National Association of Brazilian Nurses with a College Degree), currently ABEn (Brazilian Association of Nursing), in 1929. Edith Fraenkel also organized, in the beginning of 1940, the School of Nursing of USP, which she directed until 1955. Further information about her professional career can be found in SECAF, Victoria; COSTA, Hebe C. Boa-Viagem A. Enfermeiras do Brasil – História das Pioneiras. São Paulo: Biblioteca 24 horas, 2010.

27 Marcolino Gomes Candau received a fellowship from IHD to study public health at Johns Hopkins between 1940 and 1941. Among the various positions he held, Candau was director general of WHO for 20 years, between 1953 and 1973 (Site of Fundação Bunge. Available at: http://www.fundacaobunge.org.br/projetos/premio-fundacao_bunge/premiado.php?id=7&name=marcolino_gomes_candau. Accessed on: 26 set. 2013.

28 We should recall that the Foundation began its activities in the country in 1916, when cooperation was established between IHD and Brazilian states to combat hookworm (KORNDÖRFER, Ana Paula. “An international problem of serious proportions”: A cooperação entre a Fundação Rockefeller e o governo do estado do Rio Grande do Sul no combate à anilostomíase e seus desdobramentos (1919-1929). Tese (Doutorado em História) – Faculdade de Filosofia e Ciências Humanas, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, 2013).

29 This included a fellowship that covered two fields of study: public health and biological sciences.